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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,875	07/30/2003	Garry E. Balthes	29595/82608	7941

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BARNES & THORNBURG
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Fort Wayne, IN 46802

EXAMINER

BOYD, JENNIFER A

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/630,875

Applicant(s)

BALTHES ET AL.

Examiner

Jennifer A. Boyd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 1-18 and 27-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. After a phone conversation with Greg Cooper, it was agreed to send out a supplemental Non-final Office Action to replace the Final Office Action mailed June 6, 2005. The Office Action mailed June 6, 2005 was improperly made final.
2. The Applicant's Amendments and Accompanying Remarks, filed February 28, 2005, have been entered and have been carefully considered. Claim 19 is amended, claims 1 – 18 and 27 – 41 are withdrawn and claims 19 – 26 are pending. The Examiner withdraws all previously set forth rejections. After another search was conducted, additional prior art has been found which renders in the invention as currently claimed unpatentable for reasons herein below.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

4. Claims 19 – 20 and 24 - 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spengler (US 6,287,678) in view of Holtrop et al. (US 4,557,970).

Spengler is directed to a composite structural panel suitable for interior trim panels for motor vehicles (column 1, lines 15 – 28).

As to claims 19 and 20, Spengler teaches a thermoplastic foam core sandwiched between two outer layers that each respectively comprise natural fibers intermixed with thermoplastic material (column 2, lines 20 – 35). The composite panel further comprises a decorative fabric

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laminated onto the structure (column 3, lines 1 – 15). The foam core comprises polypropylene expanded beads and the outer layers comprise a polyolefin such as polypropylene and one or more natural plant fibers such as cotton, straw, flax, hemp, jute, sisal, kenaf or wood (column 2, lines 64 – 68). The outer layers are thermal fusion bonded onto the foam core (column 7, lines 1 – 20). The foam core and the two outer layers collectively are equated to Applicant's "headliner core layer". It should be noted that the term fabric by definition encompasses woven fabrics. The decorative fabric is equated to Applicant's "woven fiber layer".

Spengler fails to teach that the "headliner core layer" and the "woven fiber layer" are sandwiched between two film layers, one being a permeability-resistance film layer.

Holtrop et al. is directed to a laminate structure with improved acoustical absorption (Title). Holtrop teaches a structure having multiple foamed layers and thermoplastic films adhesively bonded to at least the outer surface of the first and third layers of foamed thermoplastic material (column 2, lines 30 – 40). The film is placed on both sides of the composite to prevent the layers from bowing, for instance, due to moisture absorption (column 4, lines 25 – 35). It is the position of the Examiner that the film layers would be impermeable meeting Applicant's requirement of "permeability resistance film layer".

It would have been obvious to use the film layers on the outer surfaces of the composite of Spengler as suggested by Holtrop motivated by the desire to prevent the composite layers from bowing.

As to claims 20, 24 and 26, Spengler in view of Holtrop discloses the claimed invention except for that the binding resin is present in the amount of 25 – 35% by weight, the sisal is

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present in an amount of about 35 – 45% by weight and the natural filler fibers are present in the amount of about 25 – 35% by weight and the film layer is 4 mil. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a composite comprising binding resin present in the amount of 25 – 35% by weight, the sisal is present in an amount of about 35 – 45% by weight and the natural filler fibers are present in the amount of about 25 – 35% by weight and the film layer is 4 mil, since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454 USPQ 233 (CCPA 1955). In the present invention, one would have been motivated to optimize the amount of amount of sisal, binder and natural filler fiber to create a core with optimum stiffness and stability and optimize the film thickness in order to create a composite having optimal strength and flexibility.

As to claim 25, Spengler in view of Holtrop discloses the claimed invention except for that the binding resin is a nylon film layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a nylon film layer since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice. *In re Leshin*, 125 USPQ 416. In the present invention, one would have been motivated to use nylon due to its excellent strength, flexibility, toughness and elasticity.

5. Claims 19 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over LaMarca, II et al. (US 5,456,976) in view of JP 01702836 A.

La Marca is directed to a flexible laminate suitable for interior trim panels (column 1,

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lines 10 – 15).

As to claim 19, La Marca teaches that the composite comprises an aesthetically pleasing facing layer A, a soft, resilient cellular polymer intermediate layer B and a non-cellular thermoplastic film backing layer C (column 4, lines 30 – 37). Layer A can comprise a structure composed of one or more elements of a woven, non-woven or knitted textile and/or of one or more elements of a polymer sheet or film (column 4, lines 60 – 68). The Examiner equates the woven fabric of layer A to Applicant's "woven fiber layer" and the polymer sheet or film to Applicant's "film layer". Layer B can comprise synthetic or natural thermosetting or thermoplastic cellular polymer (column 5, lines 1 – 15). The Examiner equates layer B to Applicant's "headliner core layer". The film backing layer C can comprise a flexible, non-cellular, homogenous flexible polymeric film (column 5, lines 15 – 35). The Examiner equates layer C to Applicant's "permeability-resistance film layer".

As to claim 21, La Marca teaches that the woven layer can comprise polyester (column 4, lines 35 – 45).

As to claim 22, La Marca teaches that the woven layer can comprise a mixture of synthetic and natural fibers such as polyester/cotton (column 4, lines 20 – 45).

As to claims 23, La Marca teaches that the film can comprise polypropylene (column 5, lines 19 – 35).

La Marca fails to teach that the soft, resilient cellular polymer intermediate layer B, or Applicant's "core", further comprises sisal fibers and randomly-oriented filler fibers.

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JP 01702836 A teaches a core for a car interior trim formed by thermosetting resin form and comprising sisal among other natural fibers used as stiff and rigid reinforcing material. The core is lightweight and has good mechanical strength (Abstract). It should be noted that JP 01702836 A does not specifically teach that a combination of natural fibers can be used (i.e., sisal and other natural fibers). However, Applicant's claim language does not preclude the interpretation of the sisal fibers also being the natural filler fibers. If the Applicant requires that the sisal fibers are different than the natural filler fibers, the Applicant should amend the claim accordingly.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate reinforcing fibers such as sisal as suggested by JP 01702836 A in the core of La Marca motivated by the desire to create a light-weight core having improved mechanical strength.

As to claims 20, La Marca in view of JP 01702836 A discloses the claimed invention except for that the binding resin is present in the amount of 25 – 35% by weight, the sisal is present in an amount of about 35 – 45% by weight and the natural filler fibers are present in the amount of about 25 – 35% by weight. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a composite comprising binding resin present in the amount of 25 – 35% by weight, the sisal is present in an amount of about 35 – 45% by weight and the natural filler fibers are present in the amount of about 25 – 35% by weight, since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*,

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220 F.2d 454 USPQ 233 (CCPA 1955). In the present invention, one would have been motivated to optimize the amount of amount of sisal, binder and natural filler fiber to create a core with optimum stiffness and stability.

As to claims 24 and 26, La Marca in view of JP 01702836 A discloses the claimed invention except for that the film layer is 4 mil. It should be noted that the film thickness is a result effective variable. For example, as the film thickness decreases, the film becomes more flexible and loses strength. It would have been obvious to one having ordinary skill in the art at the time the invention was made to create a film having a thickness of 4 mil since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In the present invention, one would have been motivated to optimize the film thickness in order to create a composite having optimal strength and flexibility.

As to claim 25, La Marca in view of JP 01702836 A discloses the claimed invention except for that the binding resin is a nylon film layer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a nylon film layer since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of design choice. *In re Leshin*, 125 USPQ 416. In the present invention, one would have been motivated to use nylon due to its excellent strength, flexibility, toughness and elasticity.

Response to Arguments

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6. Applicant's arguments with respect to claims 19 - 26 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Boyd whose telephone number is 571-272-1473. The examiner can normally be reached on Monday thru Friday (8:30am - 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jennifer Boyd
July 6, 2005


ULA RUDDOCK
PRIMARY EXAMINER